



Received & Inspected

JUL - 5 2013

FCC Mail Room

20th June 2013

Federal Communications Commission
445 12th Street SW
Washington, DC 20554
USA

Dear Sirs

**Re: In the Matter of Technological Advisory Council Recommendation for Improving
Receiver Performance - ET Docket 13-101**

Please find enclosed our submission to your call for comments on the above-mentioned subject.

We submitted our comments on your website on Thursday 20th June and have pleasure in enclosing a hard copy of the document.

Yours faithfully

Ruxandra Obreja
Chair, DRM Consortium

Enc

No. of Copies rec'd _____
List ABCDE _____

DIGITAL radio mondiale

DRM Project Office, 3rd Floor, Brock House, Langham Street, London W1A 1AA UK
Registered office: PO Box 360, CH-1218 Grand Saconnex/Geneva Switzerland

www.drm.org

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

JUL - 5 2013

FCC Mail Room

In the Matter of)
)
Technological Advisory Council) ET Docket 13-101
Recommendation for Improving)
Receiver Performance)

To: The Commission

COMMENTS OF DIGITAL RADIO MONDIALE:

Ruxandra Obreja
Chairman, DRM Consortium

Digital Radio Mondiale (DRM) hereby submits comments in response to the Federal Communications Commission (FCC) **MM Docket No. ET 13-101** (Docket) with regard to - Recommendation for Improving Receiver Performance.

Digital Radio Mondiale (DRM) is the newest and the only global system of the main digital sound broadcasting standards. The DRM standard is the only platform which covers all the world's radio broadcast bands (LF, MF and HF (DRM30) and the VHF bands I, II and III (DRM+).

We would like the FCC to consider the possibility of accepting standards (other than HD Radio™) that are offering a good service. This would allow receiver manufacturers to use the multi-standard chips already available which could accelerate the digitization of radio and increase revenue through the sale of multi-standard, global receivers to more than one market. Today, the receiver manufacturers far prefer to sell a universal receiver with global application rather than building sets for individual markets. One of the issues facing all digital radio platforms is the cost of receivers compared to standard analog units. This would greatly increase the scale of manufacturing, reducing consumer costs at the same time.

While we recognize that the US has selected HD Radio technology for its standard, other systems are in wide use in other parts of the world. We respectfully request that the FCC consider the universality which could be created by multi-standard receivers and review ITU comments featured later in this document with regard to this matter. The DRM family of standards can provide a comprehensive solution to all digital sound broadcasting needs as it can be tailored to suit the requirements of any type of sound broadcasting from wide-coverage, national and international stations to small, local, and university or community stations. In the VHF bands, the DRM+ standard can provide the same coverage, more economically than an FM broadcasting station, by using much lower power levels. In the LF, MF and HF bands, the DRM30 standard has the potential to revitalise the bands previously used for AM broadcasting with a quality of sound that is at least as good as that of FM. Although there are no spectrum savings per se, the spectrum will be used to better effect by bringing listeners reception with greater reliability and of much higher quality plus rich multimedia for all in-

home, portable and in-car uses. For broadcasters, the advantages of economy and quality are particularly attractive when considering upgrading national and international AM networks.

With DRM various added value audio and data services are available. This is particularly useful when implementing DRM30 in the MF (medium wave) and HF bands.

DRM has thus the potential to bring to every listener not just good quality audio but also a vast selection of additional rich media content. The supplementary digital data streams available within the DRM standards can be used to provide a variety of added value services, accessible through a link to a personal computer or a self-contained display device.

Several types of additional content are possible, singly or in combination and include:

- a) Additional audio/visual/text content provided under a public service remit or on revenue producing basis like: dedicated news streams or emergency broadcasts in time of crisis, natural disasters, extreme weather; government or public sector announcements or service information; - customer specific information services (e.g., stock/commodity/currency market information).
- b) Additional visual/text based programme related features possible with DRM include- web pages and links to the programme content; Journaline® text based information service (Unicode), supporting all classes of receivers, triggers interactivity and geo-awareness access additional content for advertisers, such as text or web-based material for supplementing the voice advert with more details on the products, local suppliers, pricing, ordering etc.; integrated text, graphics, web-pages, videos & slide shows with audio commentary;
- c) Additional audio based programme related features possible with DRM include stereo/surround sound/surround sound 5.1, dual or multi language programme streams translating the main programme feed or for providing an alternative programme feed.

Digital sound broadcasting is opening the door for improved or completely new broadcasting applications. This is not the radio of old but one that sits right at the heart of the connected new media space of the information society. However, given the huge base of analogue receivers in operation, the crucial question now is how to make transition to digital sound broadcasting and realize the benefits of improved audio quality and access to the wide range of service offerings now available in the audio-visual sector. It takes a lot of effort and imagination to create a receiver capable of providing some of the benefits listed above. A “flexible” receiver capable of being used for more than one standard with a selection of all available services and benefits, or just the desired ones, is what the radio manufacturers would aspire to and listeners could benefit from. Currently within the ITU the Radiocommunication Study Group 6 is proposing a revision of questions under consideration by the Assembly to include a look at “Worldwide broadcasting roaming”. As part of these questions, it proposes “that a set of ITU-R recommendations invite the ITU membership and radio receiver manufacturers to study the possibility of the development of multiband, multi-standard radio receivers (Recommendations ITU-R BS.774, ITU-R BS.1114, and ITU-R BS.1348)”

For a long while there was the hope that one particular standard will be adopted worldwide. This was a utopian hope as HD, DAB/DAB+/DMB and DRM have been adopted in various

parts of the world with various degrees of success. The first to recognize the multi-standard possibilities of digital broadcasting were the chipset manufacturers who have managed to produce multi-standard chips to be activated and used as each market demands. Premier companies like Frontier Silicon, NXP, ST Microelectronics, Silicon Labs, all intimately connected or members of the DRM Consortium are producers of such multi-standard chips for standalone or portable receivers. Please note:

Part of NXP press release of January 2012 stated:

NXP Automotive Digital Radio solution to include DRM

A new digital car radio solution including DRM will be unveiled at the Consumer Electronics Show (CES 2012) in Las Vegas this week. The DRM Consortium and NXP Semiconductors N.V. (NASDAQ: NXPI) will present one single automotive digital radio solution for all the three key global digital radio standards – DRM, HD Radio and DAB/DAB+/T-DMB - on the same co-processor, the SAF356X. The car radio platform will be unveiled on Tuesday, January 10th, at the NXP booth, Central Plaza – CP8- during a Digital Radio Mondiale Reception with DRM Consortium and key representatives from the entertainment electronics industry.....

Other manufacturers followed the example:

http://www.st.com/internet/com/press_release/t3315.jsp

<http://www.silabs.com/products/audiovideo/amfmreceivers/Pages/si468x.aspx>

Please also note confirmation of this given this year in official EBU document:

“Multi-standard chips for digital radio decoding are available from many major manufacturers which enable radios to be built that decode FM, DAB and DRM” (From EBU 138 publication)

In short FCC could encourage the production of the universal receiver and realize practically, at receiver level, the “utopian” aspiration of establishing one single digital audio broadcasting standard which could become transparent to the listener.

Ruxandra Obreja
Chairman, DRM Consortium

3rd Floor Brock House
BBC Global News
London
W1A 1AA
United Kingdom